



Foto: Volker Emersleben

Data Challenge Goethe University Frankfurt

Mobility options in smart cities - Technical Briefing

DB Systel GmbH | Norbert Schaffitzel | T.IVP 21 | Frankfurt | 26.04.2018

DB Systel

Digital bewegen. Gemeinsam.

Agenda

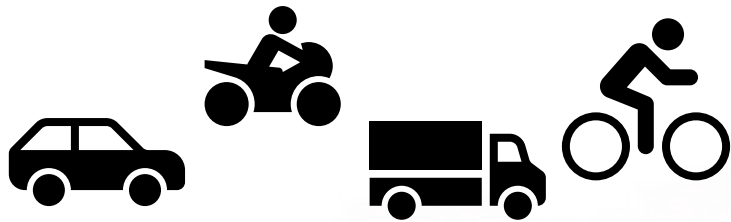


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1. What rules the system
2. Networked mobility and possible business models
3. The modular box and our Data and API structures
4. Is a brokerage platform to create a mobility service market reachable
5. Mobility meets logistics
6. Leverage the attractiveness of railway stations
7. Are further possibilities in sight

What will rule the system



- ❑ Dominant vision: individual mobility
- ❑ Usage of the vehicle requires ownership
- ❑ Infrastructure normally provided by public authorities

Domain of the car industry



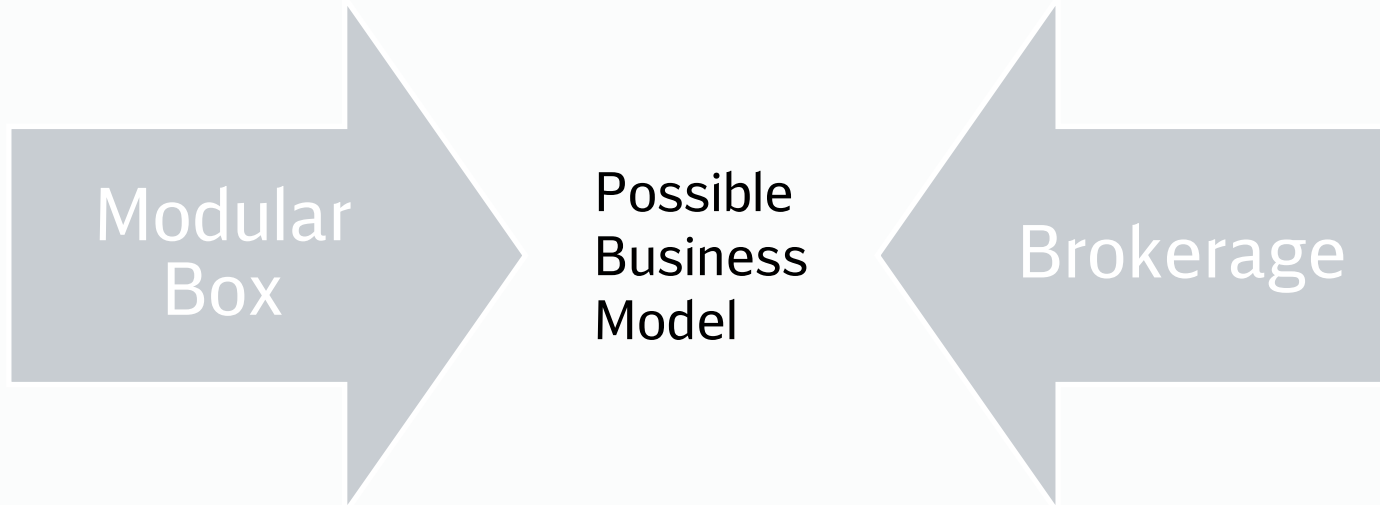
- ❑ Dominant vision: mass mobility
- ❑ Usage of vehicles centrally organized
- ❑ Infrastructure normally provided by public authorities

Domain of specialized transport organizations

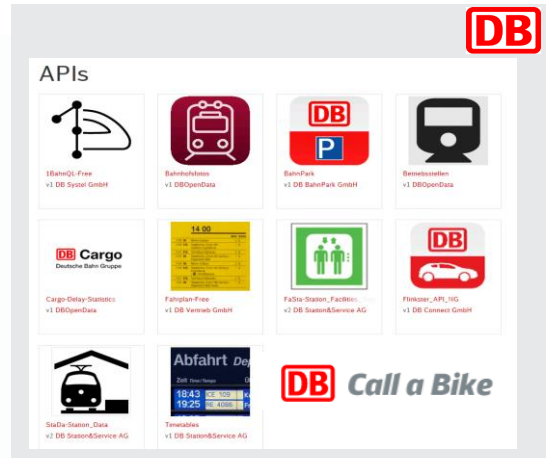


Can networked mobility become a new competitor for the game?

- ❑ Dominant vision: shared and networked mobility
- ❑ Accessibility and Usage of the vehicle is the dominant rule
- ❑ Infrastructure normally provided by public authorities
 Vehicles can be offered legally also by private institutions

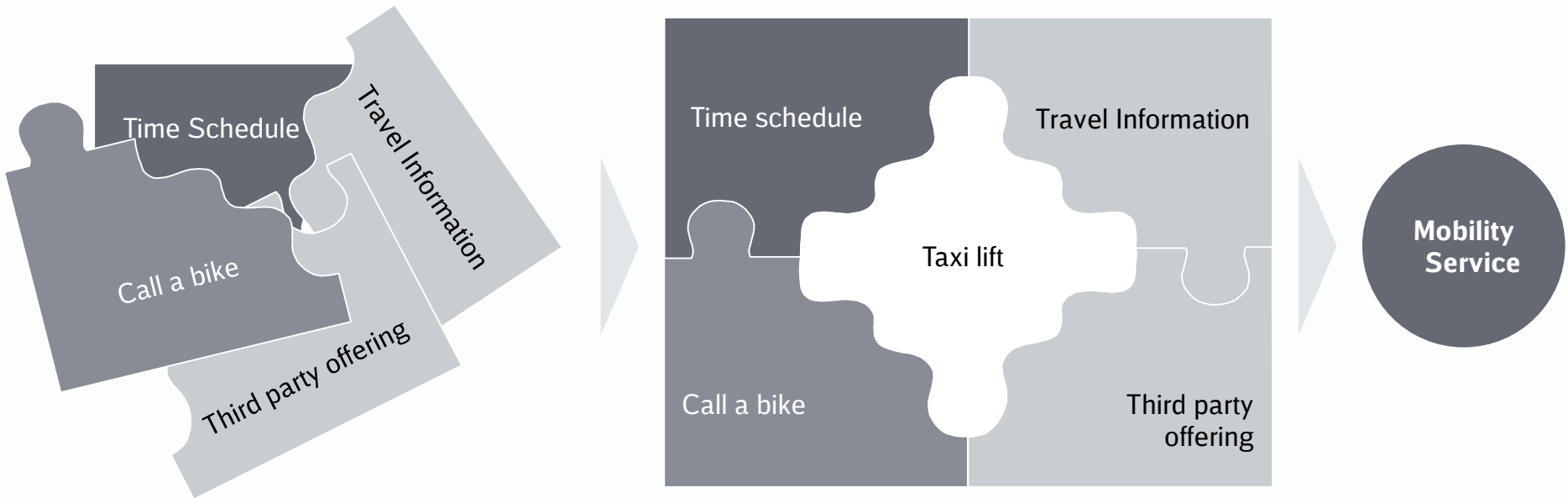


Networked mobility via modular orchestrated mobility offerings



Put the pieces together

<https://developer.deutschebahn.com/store/apis/list>



Our actual data and API-structures we can deliver



Navigation menu: Home icon, **Datensätze**, **APIs**, Blog, FAQ, Showcase. Search bar: Datensätze suchen...

Open-Data-Portal

Das Datenportal der Deutsche Bahn AG.

```
var http = require('http');
var url = "http://data.deutschebahn.com/rest-api/v1/";
var data = "";

function (res) {
  function (chunk) { data += chunk; }
  function () { console.log(data); }
}
```

Auf diesem Portal veröffentlicht die Deutsche Bahn AG einen wachsenden Datenbestand rund um Infrastruktur und Mobilität.

Unterstützer

Deutsche Bahn AG

Networked mobility via brokerage of public and private offerings

Offer a market-place that brings demand and supply together



Easy handling and usage to enable the exchange of provider and consumer



Possible data for a brokerage platform

Marketplace of mobility data (MDM)

objective individual traffic | <http://www.mdm-portal.de/>

- The marketplace brings together **supplier, user and refiner** of mobility data
- **Open, Shared und Closed Data**
- **National access point** of street traffic data (IVS) and data hub

Advantages for data supplier

- Simple and secure data proliferation
- Easy way to attract subscriber
- Simple and new business models
- Creation of new consumer opportunities

...for data consumer

- Easy research
- Supporting the contracting
- Easy data access and usage
- Secure and proven data transfer possibilities

...for data refiner

- Standardized format and transparent data quality
- Simple realization of data refinement processes
- New market chances

Mobility meets logistics



City Logistics: Smart Locker & Cargo Bikes

In logistics open, multi-vendor infrastructures are needed to **bundle traffic more strongly**. **Smart lockers and transport solutions**, such as cargo bike delivery, offer the greatest potential here.



Logistics demand for private sector can be estimated

- by using sociodemographic data → high parcel demand is e.g. related to people ... being young or ... being at work or ... living in a single household
- Data can be accessed through different regional open data platforms (Hamburg, Düsseldorf,...)
- To adress infrastructure specifications use DB Open Data or other sources (OSM,...)

Leverage the attractiveness of railway stations



Railway stations: Third Places Building Kit & Coworking Spaces

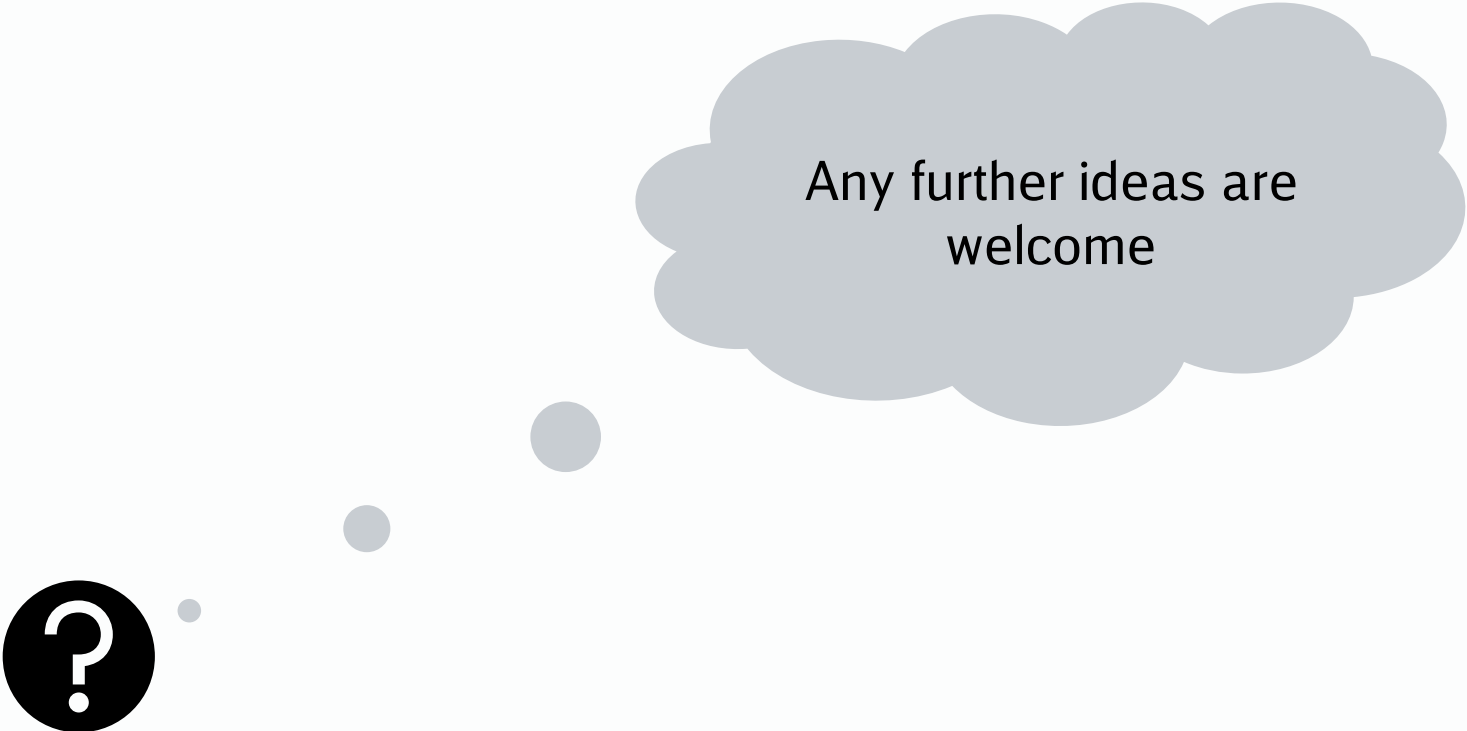
Railway stations act as **physical hubs** for mobility and logistics. We also want to **develop stations into attractions**. As a neighborhood center and hub of city interaction and recreation, **stations enhance the quality of life and create new business opportunities** (e.g. coworking spaces).



Are further business models for networked mobility possible?



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A diagram of a thought bubble is centered on the slide. It consists of a large, light gray cloud-like shape containing the text 'Any further ideas are welcome'. This cloud is connected to a smaller black circle containing a white question mark. Three small gray circles of increasing size lead from the question mark circle to the main thought bubble cloud.

Any further ideas are
welcome



Many Thanks for your attention